

19-OCT-09
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GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS AND DESIGN OF PIERS FOR BRIDGES - V 4.2.07 - AASHTO SPECS 1984 INTERIM
REVISED: JUNE 30, 2008
60' CURB-CURB; 8 BEAMS; 140' SPAN; 90' TALL; BRIDGE 4 ; PIER 7

PROB. NO. 0001

DESIGN NO.	NO. CAN	NO. COL	NO. LLC	SKEW D	ANG M	F'C PSI	FC PSI	N	FY PSI	FS PSI	DESIGN DATA		CONC.	Z	* * * CAP	REINFORCING STEEL			* * * CAP					
OPTIONS											EC KSI	ES KSI	STRAIN	FACT	MAIN SIZE	STR TOP	MAX BOT	MAX SIZE	MIN NO.	MIN CL.	MIN S.SP	MIN INCR.	MIN DEPTH	MIN BOT
D D D L	2	3	23	0-00-00		3500.	1400.	8.	60000.	24000.	3409.	29000.	0.0030	170.	11	5	16	16	11	2	2.00	4.00	3.00	2.00
COLUMN	REINFORCING	STEEL	R	KL	OC	OF	CM	BD1	BD2	IMPACT	SOIL	WT	ALL.S.P.	MIN	MAX	EDGE	PILE	REBAR	ALL.PILE	ALL.PILE				
MIN.P	MAX.P	CL.SP.	CLEAR	MODE	COEF					%	KCF		KSF	PL SP	PL SP	DIST	DEPTH	CLEAR	CAPACITY	UPLIFT				
1.00	8.00	2.50	3.750	2	2.00	0.70	0.90	0.00	1.00	0.75	18.87	0.120	0.000	3.00	9.00	1.250	1.000	3.000	235.000	-9.999				

CAP DATA

CN	C	L	A	DE	BC	BE	DH	LH	XB1	XB2	XB3	XB4	XB5	XB6	XB7	XB8
11	L	11.000	3.000	4.000	6.000	6.000	2.000	8.000	8.061	5.061						
12	C	20.625	3.000	6.000	6.000		0.000	0.000	3.000	5.331	8.196	1.098				
13	3	SAME AS CAP SECTION 2														
14	4	SAME AS CANTILEVER 1														

COLUMN DATA

CN	P	I	T	S	HT	A	DT	BT	DB	BB	DL	FLEX	ND	NB	SZ	ND	NB	SZ	ND	NB	SZ	SLOPE	EP	AP			
21	1	C	T		90.000	0.000	6.000	6.000	6.000	6.000	4.000	0.000	6	6	11	6	6	11	16	16	11	16	16	11	0.000	0.000	0.000
22	0	2	SAME AS COLUMN 1																								
23	1	3	SAME AS COLUMN 1																								

FOOTING DATA

CN	S/P	B	D	T	DEL.B	DEL.D	DEL.T	R.B/D	R.D/B	S.HT.	NP	SYM.	BP	DP	SET.
31	P	8.000	8.000	3.000	0.500	0.500	0.250	1.000	1.000	2.500	4	3	0.000	0.000	0.000
32	2	SAME AS FOOTING 1													
33	3	SAME AS FOOTING 1													

GROUP II WIND

SUPERSTRUCTURE AREA*STD.																WIND ON SUPERSTRUCTURE INTENSITIES					* WIND FORCE			* WIND ON PIER		
TRANS.	LONG.	WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	APT	APL	PT	PL										
1365.	2730.	1	50	0	44	6	41	12	33	16	17	19	7.375	7.375	11.277	73.860										

GROUP III WIND

STD. * WIND ON SUPERSTRUCTURE INTENSITIES																* STD. * WIND ON LIVE LOAD INTENSITIES					LENGTHS OF LL			* WIND ON LL ARMS		
WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	TRANS.	LONGI.	APT	APL	
1	50	0	44	6	41	12	33	16	17	19	1	100	0	88	12	82	24	66	32	34	38	140.0	280.0	15.583	15.583	

MISCELLANEOUS FORCES

CENTRI.	TRACTION	FORCE	AND	ARMS	EXPANSION	SHRINKAGE	STREAM	FLOW
FT	FL	APT	APL	COEFFICIENT	COEFFICIENT	PT	PL	
0.000	9.860	15.583	15.583	0.00018000	0.00044000	0.000	0.000	

DEAD LOAD SUPERSTRUCTURE AND LIVE LOAD CASES

I.D.	NL	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
D.L.	0	272.559 0.000	0.000 272.559	323.372	0.000	323.372	323.372	0.000	0.000	323.372	323.372	0.000	323.372
LL 1	1	75.613 0.000	0.000 0.000	61.798	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL 2	2	75.613 0.000	0.000 0.000	109.631	0.000	87.114	2.464	0.000	0.000	0.000	0.000	0.000	0.000
LL 3	3	75.613 0.000	0.000 0.000	109.631	0.000	119.824	89.579	0.000	0.000	17.587	0.000	0.000	0.000
LL 4	4	75.613 0.000	0.000 0.000	109.631	0.000	119.824	107.166	0.000	0.000	104.702	32.709	0.000	0.000
LL 5	5	75.613 0.000	0.000 0.000	109.631	0.000	119.824	107.166	0.000	0.000	107.166	119.824	0.000	47.832
LL 6	1	0.000 0.000	0.000 75.613	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	61.798
LL 7	2	0.000 0.000	0.000 75.613	0.000	0.000	0.000	0.000	0.000	0.000	2.464	87.114	0.000	109.631
LL 8	3	0.000 0.000	0.000 75.613	0.000	0.000	0.000	17.587	0.000	0.000	89.579	119.824	0.000	109.631
LL 9	4	0.000 0.000	0.000 75.613	0.000	0.000	32.709	104.702	0.000	0.000	107.166	119.824	0.000	109.631
LL10	5	0.000 0.000	0.000 75.613	47.832	0.000	119.824	107.166	0.000	0.000	107.166	119.824	0.000	109.631
LL11	1	0.000 0.000	0.000 0.000	0.000	0.000	25.148	87.114	0.000	0.000	25.148	0.000	0.000	0.000

PIER-60-8-140-90.OUT

I.D.	NL	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
LL12	2	0.000 0.000	0.000 0.000	40.271	0.000	112.263	97.140	0.000	0.000	25.148	0.000	0.000	0.000
LL13	3	0.000 0.000	0.000 0.000	40.271	0.000	112.263	107.166	0.000	0.000	112.263	40.271	0.000	0.000
LL14	4	60.490 0.000	0.000 0.000	117.192	0.000	112.263	107.166	0.000	0.000	112.263	40.271	0.000	0.000
LL15	5	60.490 0.000	0.000 0.000	117.192	0.000	112.263	107.166	0.000	0.000	112.263	117.192	0.000	60.490
LL16	2	0.000 0.000	0.000 0.000	0.000	0.000	32.709	104.702	0.000	0.000	104.702	32.709	0.000	0.000
LL17	3	0.000 0.000	0.000 0.000	47.832	0.000	119.824	107.166	0.000	0.000	104.702	32.709	0.000	0.000
LL18	4	0.000 0.000	0.000 0.000	47.832	0.000	119.824	107.166	0.000	0.000	107.166	119.824	0.000	47.832
LL19	5	75.613 0.000	0.000 0.000	109.631	0.000	119.824	107.166	0.000	0.000	107.166	119.824	0.000	47.832
LL20	2	75.613 0.000	0.000 75.613	61.798	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	61.798
LL21	3	75.613 0.000	0.000 75.613	109.631	0.000	87.114	2.464	0.000	0.000	0.000	0.000	0.000	61.798
LL22	4	75.613 0.000	0.000 75.613	109.631	0.000	87.114	2.464	0.000	0.000	2.464	87.114	0.000	109.631
LL23	5	75.613 0.000	0.000 75.613	109.631	0.000	119.824	89.579	0.000	0.000	20.051	87.114	0.000	109.631

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COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

LOAD	COL	TRANSVERSE						LONGITUDINAL					
		PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF	
UNIT F.AT CL.CAP	1	1.053	13.632	0.319	15.097	1.053	0.000	-13.632	1.333	0.333	30.000	30.000	
	2	0.000	16.174	0.362	16.368	0.000	-8.087	-8.087	1.333	0.333	30.000	30.000	
	3	-1.053	13.632	0.319	15.097	-1.053	-13.632	0.000	1.333	0.333	30.000	30.000	
EXPANSION OF CAP	1	8.626	118.614	2.787	132.205	8.626	0.000	-118.614	0.000	0.000	0.000	0.000	
	2	-17.253	0.000	0.000	0.000	-17.253	-59.307	59.307	0.000	0.000	0.000	0.000	
	3	8.626	-118.614	-2.787	-132.205	8.626	118.614	0.000	0.000	0.000	0.000	0.000	
SHRINKAGE OF CAP	1	-21.087	-289.945	-6.812	-323.168	-21.087	0.000	289.945	0.000	0.000	0.000	0.000	
	2	42.174	0.000	0.000	0.000	42.174	144.972	-144.972	0.000	0.000	0.000	0.000	
	3	-21.087	289.945	6.812	323.168	-21.087	-289.945	0.000	0.000	0.000	0.000	0.000	
DEAD LOAD TOTAL	1	1010.090 1474.490	-205.867	-3.431	-102.934	1474.490	2463.798	-2257.931	0.000	0.000	0.000	0.000	
	2	792.320 1256.720	0.000	0.000	0.000	1256.720	1241.791	-1241.791	0.000	0.000	0.000	0.000	
	3	1010.090 1474.490	205.867	3.431	102.934	1474.490	2257.931	-2463.798	0.000	0.000	0.000	0.000	
TRAC. FORCE 1 LN	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-64.363	-3.287	-347.016	-347.016	
	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-64.363	-3.287	-347.016	-347.016	
	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-64.363	-3.287	-347.016	-347.016	
WIND ON SUBSTR.	1	11.875	153.730	3.600	170.250	11.875	0.000	-153.730	-98.480	-24.620	-2215.800	-2215.800	
	2	0.000	182.391	4.077	184.580	0.000	-91.196	-91.196	-98.480	-24.620	-2215.800	-2215.800	
	3	-11.875	153.730	3.600	170.250	-11.875	-153.730	0.000	-98.480	-24.620	-2215.800	-2215.800	
GROUP 2 WIND 1 1	1	95.948	1084.123	25.386	1200.625	95.948	0.000	-1084.123	-98.480	-24.620	-2215.800	-2215.800	
	2	0.000	1286.247	28.755	1301.687	0.000	-643.124	-643.124	-98.480	-24.620	-2215.800	-2215.800	
	3	-95.948	1084.123	25.386	1200.625	-95.948	-1084.123	0.000	-98.480	-24.620	-2215.800	-2215.800	
GROUP 2 WIND 1 2	1	95.948	1084.123	25.386	1200.625	95.948	0.000	-1084.123	98.480	24.620	2215.800	2215.800	
	2	0.000	1286.247	28.755	1301.687	0.000	-643.124	-643.124	98.480	24.620	2215.800	2215.800	
	3	-95.948	1084.123	25.386	1200.625	-95.948	-1084.123	0.000	98.480	24.620	2215.800	2215.800	
GROUP 2 WIND 2 1	1	85.859	972.476	22.772	1076.980	85.859	0.000	-972.475	-160.588	-30.080	-2747.468	-2747.468	
	2	0.000	1153.785	25.794	1167.635	0.000	-576.892	-576.892	-160.588	-30.080	-2747.468	-2747.468	
	3	-85.859	972.476	22.772	1076.980	-85.859	-972.475	0.000	-160.588	-30.080	-2747.468	-2747.468	
GROUP 2 WIND 2 2	1	85.859	972.476	22.772	1076.980	85.859	0.000	-972.475	160.588	30.080	2747.468	2747.468	
	2	0.000	1153.785	25.794	1167.635	0.000	-576.892	-576.892	160.588	30.080	2747.468	2747.468	
	3	-85.859	972.476	22.772	1076.980	-85.859	-972.475	0.000	160.588	30.080	2747.468	2747.468	
GROUP 2 WIND 3 1	1	80.815	916.652	21.465	1015.157	80.815	0.000	-916.652	-222.695	-35.540	-3279.135	-3279.135	
	2	0.000	1087.553	24.313	1100.608	0.000	-543.777	-543.777	-222.695	-35.540	-3279.135	-3279.135	
	3	-80.815	916.652	21.465	1015.157	-80.815	-916.652	0.000	-222.695	-35.540	-3279.135	-3279.135	
GROUP 2 WIND 3 2	1	80.815	916.652	21.465	1015.157	80.815	0.000	-916.652	222.695	35.540	3279.135	3279.135	
	2	0.000	1087.553	24.313	1100.608	0.000	-543.777	-543.777	222.695	35.540	3279.135	3279.135	
	3	-80.815	916.652	21.465	1015.157	-80.815	-916.652	0.000	222.695	35.540	3279.135	3279.135	

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COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

LOAD	COL	TRANSVERSE						LONGITUDINAL					
		PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF	
GROUP 2 WIND 4 1	1	67.363	767.789	17.979	850.297	67.363	0.000	-767.789	-264.100	-39.180	-3633.580	-3633.580	
	2	0.000	910.936	20.365	921.871	0.000	-455.468	-455.468	-264.100	-39.180	-3633.580	-3633.580	
	3	-67.363	767.789	17.979	850.297	-67.363	-767.789	0.000	-264.100	-39.180	-3633.580	-3633.580	
GROUP 2 WIND 4 2	1	67.363	767.789	17.979	850.297	67.363	0.000	-767.789	264.100	39.180	3633.580	3633.580	
	2	0.000	910.936	20.365	921.871	0.000	-455.468	-455.468	264.100	39.180	3633.580	3633.580	

		PIER-60-8-140-90.OUT											
		COL	PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF
	3	-67.363	767.789	17.979	850.297	-67.363	-767.789	0.000	264.100	39.180	3633.580	3633.580	
GROUP 2 WIND 5 1	1	40.460	470.063	11.007	520.577	40.460	0.000	-470.063	-295.154	-41.910	-3899.414	-3899.414	
	2	0.000	557.702	12.468	564.397	0.000	-278.851	-278.851	-295.154	-41.910	-3899.414	-3899.414	
	3	-40.460	470.063	11.007	520.577	-40.460	-470.063	0.000	-295.154	-41.910	-3899.414	-3899.414	
GROUP 2 WIND 5 2	1	40.460	470.063	11.007	520.577	40.460	0.000	-470.063	295.154	41.910	3899.414	3899.414	
	2	0.000	557.702	12.468	564.397	0.000	-278.851	-278.851	295.154	41.910	3899.414	3899.414	
	3	-40.460	470.063	11.007	520.577	-40.460	-470.063	0.000	295.154	41.910	3899.414	3899.414	
GROUP 3 WIND 1 1	1	48.816	516.087	12.085	571.547	48.816	0.000	-516.087	-29.544	-7.386	-664.740	-664.740	
	2	0.000	612.306	13.688	619.656	0.000	-306.153	-306.153	-29.544	-7.386	-664.740	-664.740	
	3	-48.816	516.087	12.085	571.547	-48.816	-516.087	0.000	-29.544	-7.386	-664.740	-664.740	
GROUP 3 WIND 1 2	1	48.816	516.087	12.085	571.547	48.816	0.000	-516.087	29.544	7.386	664.740	664.740	
	2	0.000	612.306	13.688	619.656	0.000	-306.153	-306.153	29.544	7.386	664.740	664.740	
	3	-48.816	516.087	12.085	571.547	-48.816	-516.087	0.000	29.544	7.386	664.740	664.740	
GROUP 3 WIND 2 1	1	43.385	459.691	10.764	509.090	43.385	0.000	-459.691	-70.109	-10.144	-942.493	-942.493	
	2	0.000	545.396	12.193	551.942	0.000	-272.698	-272.698	-70.109	-10.144	-942.493	-942.493	
	3	-43.385	459.691	10.764	509.090	-43.385	-459.691	0.000	-70.109	-10.144	-942.493	-942.493	
GROUP 3 WIND 2 2	1	43.385	459.691	10.764	509.090	43.385	0.000	-459.691	70.109	10.144	942.493	942.493	
	2	0.000	545.396	12.193	551.942	0.000	-272.698	-272.698	70.109	10.144	942.493	942.493	
	3	-43.385	459.691	10.764	509.090	-43.385	-459.691	0.000	70.109	10.144	942.493	942.493	
GROUP 3 WIND 3 1	1	40.670	431.492	10.104	477.862	40.670	0.000	-431.492	-110.674	-12.902	-1220.247	-1220.247	
	2	0.000	511.940	11.445	518.086	0.000	-255.970	-255.970	-110.674	-12.902	-1220.247	-1220.247	
	3	-40.670	431.492	10.104	477.862	-40.670	-431.492	0.000	-110.674	-12.902	-1220.247	-1220.247	
GROUP 3 WIND 3 2	1	40.670	431.492	10.104	477.862	40.670	0.000	-431.492	110.674	12.902	1220.247	1220.247	
	2	0.000	511.940	11.445	518.086	0.000	-255.970	-255.970	110.674	12.902	1220.247	1220.247	
	3	-40.670	431.492	10.104	477.862	-40.670	-431.492	0.000	110.674	12.902	1220.247	1220.247	
GROUP 3 WIND 4 1	1	33.430	356.298	8.343	394.586	33.430	0.000	-356.298	-137.718	-14.741	-1405.415	-1405.415	
	2	0.000	422.726	9.450	427.800	0.000	-211.363	-211.363	-137.718	-14.741	-1405.415	-1405.415	
	3	-33.430	356.298	8.343	394.586	-33.430	-356.298	0.000	-137.718	-14.741	-1405.415	-1405.415	
GROUP 3 WIND 4 2	1	33.430	356.298	8.343	394.586	33.430	0.000	-356.298	137.718	14.741	1405.415	1405.415	
	2	0.000	422.726	9.450	427.800	0.000	-211.363	-211.363	137.718	14.741	1405.415	1405.415	
	3	-33.430	356.298	8.343	394.586	-33.430	-356.298	0.000	137.718	14.741	1405.415	1405.415	
GROUP 3 WIND 5 1	1	18.949	205.908	4.822	228.035	18.949	0.000	-205.908	-158.001	-16.120	-1544.292	-1544.292	
	2	0.000	244.298	5.461	247.230	0.000	-122.149	-122.149	-158.001	-16.120	-1544.292	-1544.292	
	3	-18.949	205.908	4.822	228.035	-18.949	-205.908	0.000	-158.001	-16.120	-1544.292	-1544.292	

□ COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

		TRANSVERSE									* LONGITUDINAL		
LOAD	COL	PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF	
GROUP 3 WIND 5 2	1	18.949	205.908	4.822	228.035	18.949	0.000	-205.908	158.001	16.120	1544.292	1544.292	
	2	0.000	244.298	5.461	247.230	0.000	-122.149	-122.149	158.001	16.120	1544.292	1544.292	
	3	-18.949	205.908	4.822	228.035	-18.949	-205.908	0.000	158.001	16.120	1544.292	1544.292	
LIVE LOAD LL 1	1	169.498	-101.823	-1.532	-36.030	169.498	609.516	-507.693	0.000	0.000	0.000	0.000	
	2	-36.064	60.244	1.169	45.004	-36.064	-154.092	93.847	0.000	0.000	0.000	0.000	
	3	3.977	11.815	0.362	20.789	3.977	-11.815	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL 2	1	264.246	-48.242	-0.703	-14.988	264.246	609.516	-561.274	0.000	0.000	0.000	0.000	
	2	12.657	12.955	0.317	15.611	12.657	12.937	-25.892	0.000	0.000	0.000	0.000	
	3	-2.081	17.021	0.385	17.644	-2.081	-17.021	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL 3	1	262.827	-7.480	-0.060	2.079	262.827	548.565	-541.085	0.000	0.000	0.000	0.000	
	2	115.264	-27.706	-0.397	-8.034	115.264	215.056	-187.350	0.000	0.000	0.000	0.000	
	3	-7.080	23.548	0.457	17.593	-7.080	-23.548	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL 4	1	214.683	-13.091	-0.142	0.304	214.683	457.137	-444.047	0.000	0.000	0.000	0.000	
	2	182.613	9.716	0.238	11.708	182.613	315.918	-325.634	0.000	0.000	0.000	0.000	
	3	14.937	-10.325	-0.096	1.687	14.937	10.325	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL 5	1	210.139	-16.995	-0.159	2.664	210.139	457.137	-440.142	0.000	0.000	0.000	0.000	
	2	219.154	45.183	0.877	33.753	219.154	405.724	-450.907	0.000	0.000	0.000	0.000	
	3	85.998	-50.511	-0.718	-14.094	85.998	50.511	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL 6	1	3.977	-11.815	-0.362	-20.789	3.977	0.000	11.815	0.000	0.000	0.000	0.000	
	2	-36.064	60.244	-1.169	-45.004	-36.064	-93.847	154.092	0.000	0.000	0.000	0.000	
	3	169.498	101.823	1.532	36.030	169.498	507.693	-609.516	0.000	0.000	0.000	0.000	
LIVE LOAD LL 7	1	-2.081	-17.021	-0.385	-17.644	-2.081	0.000	17.021	0.000	0.000	0.000	0.000	
	2	12.657	12.955	-0.317	-15.611	12.657	25.892	-12.937	0.000	0.000	0.000	0.000	
	3	264.246	48.242	0.703	14.988	264.246	561.274	-609.516	0.000	0.000	0.000	0.000	
LIVE LOAD LL 8	1	-7.080	-23.548	-0.457	-17.593	-7.080	0.000	23.548	0.000	0.000	0.000	0.000	
	2	115.264	27.706	0.397	8.034	115.264	187.350	-215.056	0.000	0.000	0.000	0.000	
	3	262.827	7.480	0.060	-2.079	262.827	541.085	-548.565	0.000	0.000	0.000	0.000	
LIVE LOAD LL 9	1	14.937	10.325	0.096	-1.687	14.937	0.000	-10.325	0.000	0.000	0.000	0.000	
	2	182.613	-9.716	-0.238	-11.708	182.613	325.634	-315.918	0.000	0.000	0.000	0.000	
	3	214.683	13.091	0.142	-0.304	214.683	444.047	-457.137	0.000	0.000	0.000	0.000	
LIVE LOAD LL10	1	85.998	50.511	0.718	14.094	85.998	0.000	-50.511	0.000	0.000	0.000	0.000	
	2	219.154	-45.183	-0.877	-33.753	219.154	450.907	-405.724	0.000	0.000	0.000	0.000	
	3	210.139	16.995	0.159	-2.664	210.139	440.142	-457.137	0.000	0.000	0.000	0.000	
LIVE LOAD LL11	1	23.228	34.307	0.548	15.040	23.228	0.000	-34.307	0.000	0.000	0.000	0.000	
	2	118.460	-36.851	-0.638	-20.539	118.460	221.383	-184.532	0.000	0.000	0.000	0.000	
	3	-4.279	6.772	0.089	1.272	-4.279	-6.772	0.000	0.000	0.000	0.000	0.000	
LIVE LOAD LL12	1	111.412	89.836	1.409	37.000	111.412	0.000	-89.836	0.000	0.000	0.000	0.000	
	2	174.258	-87.005	-1.538	-51.421	174.258	400.798	-313.793	0.000	0.000	0.000	0.000	
	3	-10.848	13.006	0.129	-1.416	-10.848	-13.006	0.000	0.000	0.000	0.000	0.000	

□ COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

TRANSVERSE * LONGITUDINAL

LOAD	COL	PIER-60-8-140-90.OUT										
		PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF
LIVE LOAD LL13	1	93.706	70.490	1.128	31.017	93.706	0.000	-70.490	0.000	0.000	0.000	0.000
	2	257.962	-32.741	-0.593	-20.598	257.962	522.732	-489.991	0.000	0.000	0.000	0.000
	3	19.342	-29.294	-0.535	-18.875	19.342	29.294	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL14	1	200.398	-2.352	0.021	4.230	200.398	365.707	-363.356	0.000	0.000	0.000	0.000
	2	193.331	8.862	0.208	9.837	193.331	343.155	-352.018	0.000	0.000	0.000	0.000
	3	18.505	-17.322	-0.229	-3.255	18.505	17.322	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL15	1	196.497	-5.577	0.009	6.412	196.497	365.707	-360.130	0.000	0.000	0.000	0.000
	2	224.068	39.561	0.762	28.981	224.068	420.398	-459.959	0.000	0.000	0.000	0.000
	3	94.727	-52.385	-0.771	-16.992	94.727	52.385	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL16	1	21.997	30.787	0.513	15.394	21.997	0.000	-30.787	0.000	0.000	0.000	0.000
	2	230.827	0.000	0.000	0.000	230.827	408.286	-408.286	0.000	0.000	0.000	0.000
	3	21.997	-30.787	-0.513	-15.394	21.997	0.000	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL17	1	105.071	75.932	1.208	32.792	105.071	0.000	-75.932	0.000	0.000	0.000	0.000
	2	251.594	-42.561	-0.767	-26.454	251.594	517.784	-475.224	0.000	0.000	0.000	0.000
	3	14.345	-23.024	-0.441	-16.686	14.345	23.024	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL18	1	83.015	59.372	0.990	29.686	83.015	0.000	-59.372	0.000	0.000	0.000	0.000
	2	246.202	0.000	0.000	0.000	246.202	521.292	-521.292	0.000	0.000	0.000	0.000
	3	83.015	-59.372	-0.990	-29.686	83.015	59.372	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL19	1	210.139	-16.995	-0.159	2.664	210.139	457.137	-440.142	0.000	0.000	0.000	0.000
	2	219.154	45.183	0.877	33.753	219.154	405.724	-450.907	0.000	0.000	0.000	0.000
	3	85.998	-50.511	-0.718	-14.094	85.998	50.511	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL20	1	173.475	-113.639	-1.894	-56.819	173.475	609.516	-495.878	0.000	0.000	0.000	0.000
	2	-72.128	0.000	0.000	0.000	-72.128	-247.939	247.939	0.000	0.000	0.000	0.000
	3	173.475	113.639	1.894	56.819	173.475	495.878	-609.516	0.000	0.000	0.000	0.000
LIVE LOAD LL21	1	241.401	-54.052	-0.958	-32.200	241.401	548.565	-494.513	0.000	0.000	0.000	0.000
	2	-21.066	-42.560	-0.767	-26.454	-21.066	-72.819	115.380	0.000	0.000	0.000	0.000
	3	150.675	106.960	1.725	48.306	150.675	441.605	-548.565	0.000	0.000	0.000	0.000
LIVE LOAD LL22	1	196.624	-48.948	-0.816	-24.474	196.624	457.137	-408.190	0.000	0.000	0.000	0.000
	2	18.985	0.000	0.000	0.000	18.985	29.122	-29.122	0.000	0.000	0.000	0.000
	3	196.624	48.948	0.816	24.474	196.624	408.190	-457.137	0.000	0.000	0.000	0.000
LIVE LOAD LL23	1	217.462	-18.999	-0.339	-11.500	217.462	457.137	-438.138	0.000	0.000	0.000	0.000
	2	105.546	-32.805	-0.569	-18.403	105.546	198.632	-165.828	0.000	0.000	0.000	0.000
	3	192.284	55.805	0.908	25.902	192.284	401.332	-457.137	0.000	0.000	0.000	0.000

CAP ANALYSIS AND DESIGN DATA

CAP MOMENTS AND SHEARS

POINT	MOMENTS (KIP- FEET)								SHEARS (KIPS)							
	D.L. TOT.	G1 MAX.+	G1 MAX.-	G2 MAX.+	G2 MAX.-	G3 MAX.+	G3 MAX.-	DL T.LT	DL T.RT	G1 + LT	G1 + RT	G1 - LT	G1 - RT			
P 1	-21.450	-21.450	-21.450	-21.450	-21.450	-21.450	-21.450	-15.018	-369.344	-15.018	-369.344	-15.018	-533.500			
P 2	-1967.967	-1967.967	-2798.760	-1967.967	-1967.967	-1967.967	-2465.448	-401.127	-401.127	-401.127	-401.127	-565.282	-565.282			
C 1L	-3202.937	-3202.937	-4526.197	-3202.937	-3202.937	-3202.937	-3995.308	-422.187		-422.187		-586.343				
C 1R	-2935.310	-2884.188	-4153.835	-1525.950	-4344.669	-2233.785	-4335.878		470.547		679.196		455.175			
P 4	-1555.259	-1286.953	-2448.481	-472.506	-2638.012	-879.162	-2605.557	449.487	449.487	658.136	658.136	434.115	434.115			
P 5	741.203	1832.864	219.338	1243.576	238.830	1634.043	189.559	412.063	-8.320	620.713	69.974	396.692	-107.795			
P 6	437.228	797.181	234.304	827.144	47.312	838.385	130.101	-65.856	-486.240	12.438	-407.945	-165.331	-795.106			
P 7	-100.895	202.497	-430.863	408.559	-610.349	323.298	-541.002	-493.948	-493.948	-415.653	-415.653	-802.814	-802.814			
C 2L	-1614.328	-1076.052	-2749.178	-778.267	-2450.388	-894.008	-2691.878	-515.008		-436.713		-823.874				
C 2R	-1614.328	-1076.052	-2746.053	-778.267	-2450.388	-894.008	-2690.007		515.008		782.260		436.713			
P 8	-100.895	202.497	-547.696	408.560	-610.349	323.298	-610.961	493.948	493.948	761.200	761.200	415.653	415.653			
P 9	437.228	792.003	76.233	827.145	47.312	835.284	35.448	486.240	65.856	753.492	158.616	407.945	-12.438			
P10	741.204	1538.125	219.338	1243.577	238.831	1457.552	189.559	8.320	-412.063	101.080	-388.512	-69.974	-620.713			
P11	-1555.259	-1338.457	-2448.481	-472.506	-2638.011	-910.003	-2605.557	-449.487	-449.487	-425.936	-425.936	-658.136	-658.136			
C 3L	-2935.310	-2884.188	-4153.835	-1525.950	-4344.669	-2233.785	-4335.878	-470.547		-446.996		-679.196				
C 3R	-3202.937	-3202.937	-4526.197	-3202.937	-3202.937	-3202.937	-3995.308		422.187		586.343		422.187			
P13	-1967.967	-1967.967	-2798.760	-1967.967	-1967.967	-1967.967	-2465.448	401.127	401.127	565.282	565.282	401.127	401.127			
P14	-21.450	-21.450	-21.450	-21.450	-21.450	-21.450	-21.450	369.344	15.018	533.500	15.018	369.344	15.018			

PT.	CAP DESIGN DATA		LEFT STIRRUPS		RIGHT STIRRUPS		D IN.	FC PSI	PS %	FS/FF RATIO	FS/FZ RATIO
	M+ UNF. K-FT.	M- UNF. K-FT.	TOP REINFORCE. AS NO. SIZE	BOT. REINFORCE. AS NO. SIZE	M.SP. AV/IN BAR&SPAC	M.SP. AV/IN BAR&SPAC					
P 1	-16.500	-16.500	3.12 2 # 11	3.12 2 # 11	0.00 0.000 #5@ 0.00	24.00 0.060 #5@10.33	56.82		0.08	0.000	0.067
P 2	-1513.821	-1896.498	9.23 6 # 11	3.12 2 # 11	24.00 0.060 #5@10.33	24.00 0.060 #5@10.33	72.00		0.19	0.560	1.413
C 1	-2234.383	-3073.314	15.10 10 # 11	3.12 2 # 11	24.00 0.060 #5@10.33	24.00 0.060 #5@10.33	72.00		0.33	0.695	1.176
P 4	-1072.767	-1607.787	9.10 6 # 11	3.12 2 # 11	24.00 0.060 #5@10.33	24.00 0.060 #5@10.33	72.00		0.18	0.644	1.198
P 5	1072.994	329.776	3.12 2 # 11	8.01 6 # 11	24.00 0.060 #5@10.33	0.00 0.000 #5@ 0.00	72.00		0.16	0.689	0.800

PIER-60-8-140-90.OUT														
P 6	502.130	242.859	3.12	2 # 11	3.80	3 # 11	0.00	0.000 #5@ 0.00	24.00	0.085 #5@ 7.29	72.00	0.13	0.497	0.929
P 7	62.136	-229.601	3.12	2 # 11	3.12	2 # 11	24.00	0.087 #5@ 7.11	24.00	0.087 #5@ 7.11	72.00	0.11	0.577	0.000
C 2	-993.852	-1764.522	9.10	6 # 11	3.12	2 # 11	24.00	0.093 #5@ 6.65	24.00	0.081 #5@ 7.62	72.00	0.18	0.900	1.315
P 8	62.136	-283.415	3.12	2 # 11	3.12	2 # 11	24.00	0.075 #5@ 8.23	24.00	0.075 #5@ 8.23	72.00	0.11	0.710	0.000
P 9	499.745	170.049	3.12	2 # 11	3.79	3 # 11	24.00	0.073 #5@ 8.47	0.00	0.000 #5@ 0.00	72.00	0.13	0.604	0.925
P10	937.232	329.776	3.12	2 # 11	6.71	5 # 11	0.00	0.000 #5@ 0.00	24.00	0.060 #5@10.33	72.00	0.14	0.687	0.887
P11	-1096.490	-1607.786	9.10	6 # 11	3.12	2 # 11	24.00	0.060 #5@10.33	24.00	0.060 #5@10.33	72.00	0.18	0.622	1.198
C 3	-2234.383	-3073.314	15.10	10 # 11	3.12	2 # 11	24.00	0.060 #5@10.33	24.00	0.060 #5@10.33	72.00	0.33	0.695	1.176
P13	-1513.821	-1896.498	9.23	6 # 11	3.12	2 # 11	24.00	0.060 #5@10.33	24.00	0.060 #5@10.33	72.00	0.19	0.560	1.413
P14	-16.500	-16.500	3.12	2 # 11	3.12	2 # 11	24.00	0.060 #5@10.33	0.00	0.000 #5@ 0.00	56.82	0.08	0.000	0.067

NOTE: *** FS/FZ RATIO EXCEEDS 1.0! ***

COLUMN ANALYSIS AND DESIGN OUTPUT

CRITICAL COLUMN LOADS																						
CN	T	B	GR	LLC	WC	R	E	C	S	F	PF	MTF	MLF	PM	MTM	MLM	PU	MTU	MLU	PU/PM	B	D
1	T	1	LL	3	0.0						1883.7	-283.9	0.0	1883.7	1536.1	3571.4	4935.2	4043.3	9400.7	2.630	72.00	72.00
1	B	2		5.1							1969.4	542.9	-5069.2	1969.4	1415.2	10594.7	1957.8	1406.8	10532.4	0.994	72.00	72.00
2	T	1	LL13	0.0							1590.1	-71.1	0.0	1590.1	1257.1	2336.6	5884.2	4652.4	8647.3	3.701	72.00	72.00
2	B	2		5.1							1633.7	733.7	-5069.2	1633.7	1173.9	8688.3	1698.8	1220.5	9032.9	1.040	72.00	72.00
3	T	1	LL	8	0.0						1883.7	283.9	0.0	1883.7	1536.1	3571.4	4935.2	4043.3	9400.7	2.630	72.00	72.00
3	B	2		5.1	R						1969.4	-542.9	5069.2	1969.4	1415.2	10594.7	1957.8	1406.8	10532.4	0.994	72.00	72.00

COLUMN DESIGN DATA																				
CN	T	B	FACE 1	B	FACE 2	D	FACE 3	D	FACE 4	AS	PS	BD12	BD	SUMPU	SUMPC	DEL.T	DEL.L	CM	R	PHIC
1	T	11	# 11	11	# 11	6	# 11	6	# 11	53.04	1.023	1.00	0.955	5367.	20314.	1.359	3.160	1.000	2	0.70
1	B	8	# 11	8	# 11	12	# 11	12	# 11	62.40	1.204	1.00	0.000	4562.	27648.	1.198	2.090	1.000	2	0.70
2	T	11	# 11	11	# 11	6	# 11	6	# 11	53.04	1.023	1.00	0.000	5367.	22262.	1.318	2.449	1.000	2	0.70
2	B	11	# 11	11	# 11	6	# 11	6	# 11	53.04	1.023	1.00	0.000	4562.	27648.	1.198	1.714	1.000	2	0.70
3	T	11	# 11	11	# 11	6	# 11	6	# 11	53.04	1.023	1.00	0.955	5367.	20314.	1.359	3.160	1.000	2	0.70
3	B	8	# 11	8	# 11	12	# 11	12	# 11	62.40	1.204	1.00	0.000	4562.	27648.	1.198	2.090	1.000	2	0.70

FOOTING 1 DESIGN LOADS																			
F	G	LLID	WC	ES	C	S	P	MT	VT	ML	VL	P4	P3	P2	P1	MTF	VBF	VPF	LOAD
3	2		4.1R				1541.853	-747.364	-14.548	3633.580	39.180	256.780	47.660	83.462	292.582	136.824	21.180	45.863	MAX.P1
3	2		4.1R				2004.409	-971.573	-18.912	4723.654	50.934	333.814	61.958	108.501	380.357	177.871	27.534	59.622	MAX.MT
3	2		4.1R				2004.409	-971.573	-18.912	4723.654	50.934	333.814	61.958	108.501	380.357	177.871	27.534	59.622	MAX.VT
3	2		4.1R				2004.409	-971.573	-18.912	4723.654	50.934	333.814	61.958	108.501	380.357	177.871	27.534	59.622	MAX.VP
3	2		5.1R				1969.435	-542.937	-9.849	5069.238	54.483	350.572	58.866	84.748	376.454	199.410	30.868	58.619	MAX.ML
3	2		5.1R				1969.435	-542.937	-9.849	5069.238	54.483	350.572	58.866	84.748	376.454	199.410	30.868	58.619	MAX.VL
2	2		4.1				1256.720	921.871	20.365	-3633.580	-39.180	223.871	14.751	59.344	268.464	118.406	18.330	37.687	MAX.P3

FOOTING 1 ANALYSIS/DESIGN RESULTS

FOOTING SIZE				* BAR REINFORCEMENT STEEL *					SECTION CAPACITIES				*
B	D	T	P1/PA	AS	NO.SIZE	SPAC.	PLACEMENT	MT.	VB	VP	DS	FC	
13.750	13.750	4.000	0.996	1.32	15 #10	@11.000	TOP TRAN	186.605	37.528	75.056	31.095	0.000	
				1.42	16 #10	@10.250	BOT.LONG	206.975	39.061	78.121	32.365	0.000	

NUMBER OF PILES = 10 BP = 1.875 DP = 5.625

FOOTING 2 DESIGN SAME AS FOOTING 1

FOOTING 3 DESIGN SAME AS FOOTING 1